DuckTix Usability Report

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Introduction

System Description

DuckTix is an electronic ticketing system that allows University of Oregon (UO) students to easily and efficiently obtain student football tickets. Currently, UO students have to wait in line for hours at the ticketing offices in order to obtain the free football tickets. According to The Daily Emerald\(^1\), students have skipped classes and lost sleep just to get these tickets. DuckTix proposes to solve this problem.

DuckTix allows students to register for tickets to the Ducks football games. If there are more registrants than the number of free tickets for that game, DuckTix will apportion the tickets to the registrants based on a Priority-Lottery Algorithm. This algorithm gives certain students, such as seniors and die-hard fans, a better chance of getting the tickets. While these students may have a higher chance of getting a ticket, there is still a percentage that they may not get a ticket at all. Hence the term: priority-lottery.

The students can log into DuckTix using their student identity numbers (SID) and personal access code (PAC). After logging in, students can register for tickets to the games they wish to attend. Students can also give up their allotted tickets should they decide that they do not want to attend the game. This can greatly improve the turnout at the games. Additionally, students can trade their allotted tickets for another game with other DuckTix users. Through DuckTix, students can send their comments and feedback to the DuckTix administrator.

Usability Requirements

For the usability test, we wanted to evaluate how user-friendly DuckTix is. We wanted to find out if the general student populous (by way of the sample of test participants) is able to perform the main DuckTix tasks without any assistance.

Our team got together and discussed what we would like to achieve in our test. First, we defined our intended users to be UO students with an average background in computer usage. We wanted our test subjects to be of a range from freshmen and seniors. Due to limited resources, we decided that the age range for the participants would be between 18 and 27. For the test, we will try to get as diverse a group of students as possible. As for the equipment, we needed a laptop to run the DuckTix system. We will also need a separate monitor for the task coordinator.

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\(^1\) Brook Reinhard. "Students sacrifice sleep, academics." The Daily Emerald October 08, 2002.
Additionally, we will need two input devices (such as mice) — one for the participant, and the other for the task coordinator. We also need a video camera to capture the session for reviewing purposes.

Our team came up with a list of five tasks for the participant to perform. These five tasks are registering for a ticket, reading the DuckTix news, checking the status of a registered ticket, writing a feedback, and giving up a ticket. You can find the set of tasks in Appendix A. Since the DuckTix prototype is event-driven, we need a test coordinator to perform certain tasks to simulate the events. During the meeting, we also came up with a Task Coordinator Tasks sheet (Appendix B) to compliment the DuckTix User Tasks sheet.

For the test monitor, we revised the "Ten Steps for Conducting a User Observation" guidelines by Apple Computer to suit our needs. This script was developed in bullet format as a quick reference guide for the test monitor. The bullet format also forces the test monitor to use his or her own words when briefing the participants. This creates a more personal experience than to have the test monitor read a script to the participant. You can find this script in Appendix D.

For the test, our group wants to evaluate the usability of DuckTix to the general student population. We want to test how intuitive the layout is, and how fast the user takes to perform a task on the first try. We speculated that the participants should take no more than 15 minutes to perform all the five tasks. If a participant takes more than 15 minutes to understand the DuckTix system, we would deem that as a critical error in our design.
Testing and Evaluation

Description of Usability Test

Videotaped Usability Study
For our user evaluations, we videotaped our test subjects performing a variety of tasks using the DuckTix system. For each participant we recorded the introduction to the testing environment as well as the entire testing process; all the actions taken by the participant while performing the tasks, questions or confusion that came up during the evaluation, and suggestions for improvement. We asked the participants to read their set of task instructions, and to talk through their thought process as they performed each task.

The Participants
We evaluated five different participants: Ben, Mike, May, Julie, and Monica. The following table (Table 1) outlines the participants’ names, their level of education and area of study, and their computer expertise.

<table>
<thead>
<tr>
<th>Participant</th>
<th>Education Level, Degree</th>
<th>Computer Expertise</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ben</td>
<td>Freshman, Undeclared</td>
<td>Average</td>
</tr>
<tr>
<td>Will</td>
<td>Graduate, Computer Science from Willamette Univ.</td>
<td>High</td>
</tr>
<tr>
<td>May</td>
<td>Senior, School of Business</td>
<td>Average</td>
</tr>
<tr>
<td>Julie</td>
<td>PhD Candidate, Biology</td>
<td>Low</td>
</tr>
<tr>
<td>Monica</td>
<td>PhD Candidate, Physics</td>
<td>Low - Average</td>
</tr>
</tbody>
</table>

Table 1. The participants

We tried to select testing participants who were diverse both in their educational backgrounds as well as their level of computer expertise. In doing so, we felt we might best target our potential users and the design's weaknesses.

Participant Tasks
The following is the list of tasks and the set of tables (Table 2 – 6) detailing each of the participants’ performance on the following tasks. The tasks can also be found in Appendix A.

1. **Register for a football ticket**
   For the most part this task was fairly obvious to all the participants.

2. **Read the Duck Football news**
   Only one person had a problem realizing that the News page actually contained news.
3. **Check the status of a ticket – i.e. was the ticket awarded or not?**
   This was our biggest problem area. The location of the ticket awarded status is not very clear. Only one participant found the status of the ticket under My Account on the first try.

4. **Write a feedback email to the DuckTix administrator**
   Everyone found the format of the response form familiar and easy to use.

5. **Give up an unused ticket.**
   This process confused a few of the participants; mostly due to the dialogue pop-up box that confirms the user’s desire to give up a ticket. The dialogue here needs to be more descriptive in order to be useful.

### Participant 1 - Ben

<table>
<thead>
<tr>
<th><strong>Task</strong></th>
<th><strong>Performance and Issues</strong></th>
<th><strong>Other Notes</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Register for ticket</td>
<td>Login: Okay</td>
<td>Checking of the status of ticket probably should be more clearly labeled.</td>
</tr>
<tr>
<td></td>
<td>Found Ticket Booth Tab</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Clicked easily through the get tickets process</td>
<td></td>
</tr>
<tr>
<td>Read the news</td>
<td>Clicked on News Tab</td>
<td>He suggested that we use a more interesting color scheme.</td>
</tr>
<tr>
<td></td>
<td>Log out: ok</td>
<td></td>
</tr>
<tr>
<td>Check ticket status</td>
<td>1st went to Feedback (incorrect), looked around, realized it wasn’t where he needed to be</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2nd then went to News (incorrect),</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3rd finally click on My Tickets (correct) and found the status</td>
<td></td>
</tr>
<tr>
<td>Write feedback</td>
<td>Found Feedback tab quickly, wrote and sent email.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Did not seem confused by format.</td>
<td></td>
</tr>
<tr>
<td>Give up a ticket</td>
<td>1st clicked on My Tickets (incorrect)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2nd then click on Ticket Booth (correct) clicked on Give Up Tickets, and gave up the tickets. He was not confused by the alert messages that popped up when he confirmed the giving away of his ticket.</td>
<td></td>
</tr>
</tbody>
</table>

Table 2. Participant Task and Performance Table: P1 – Ben
**Participant 2 - Will**

<table>
<thead>
<tr>
<th>Task</th>
<th>Performance and Issues</th>
<th>Other Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Register for ticket</td>
<td>Login: OK</td>
<td>The participant went quickly through the tasks, and didn’t fully read the instructions.</td>
</tr>
<tr>
<td></td>
<td>Didn’t actually register for a ticket, he went to the Ticket Booth, and clicked on Get Tickets, but then skipped the step where he registered for the game. This is possibly because he didn’t read the instructions.</td>
<td></td>
</tr>
<tr>
<td>Read the news</td>
<td>No Problem with this</td>
<td>He suggested that on the login screen we keep the tab/returns consistent.</td>
</tr>
<tr>
<td></td>
<td>Log out: ok</td>
<td></td>
</tr>
<tr>
<td>Check ticket status</td>
<td>Since he didn’t register for the ticket, he didn’t have a status to check.</td>
<td></td>
</tr>
<tr>
<td>Write feedback</td>
<td>Found the Feedback tab and sent email.</td>
<td></td>
</tr>
<tr>
<td>Give up a ticket</td>
<td>1st went to My Ticket (incorrect)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2nd went to Ticket Booth (correct), but didn’t have a ticket to give up since he never registered.</td>
<td></td>
</tr>
</tbody>
</table>

Table 3. Participant Task and Performance Table: P2 – Will

**Participant 3 - May**

<table>
<thead>
<tr>
<th>Task</th>
<th>Performance and Issues</th>
<th>Other Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Register for ticket</td>
<td>Login: OK</td>
<td>In the My Account “Status” the word <em>pending</em> is unclear in its meaning. It should be more descriptive.</td>
</tr>
<tr>
<td></td>
<td>She was confused by the News page, immediately started looking for ticket registration on the News page.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Found Ticket Booth, but didn’t notice the Tabbed panes at first. Clicked on Get Tickets and selected the game to attend.</td>
<td></td>
</tr>
<tr>
<td>Read the news</td>
<td>No Problem with this</td>
<td>She didn’t initially see the Tabs, perhaps because the color and font of the tab heading is small and dark.</td>
</tr>
<tr>
<td></td>
<td>Log out: ok</td>
<td></td>
</tr>
</tbody>
</table>

DuckTix Usability Report
### Participant 3 - May

<table>
<thead>
<tr>
<th>Task</th>
<th>Performance and Issues</th>
<th>Other Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Check ticket status</td>
<td>She didn’t win the lottery and was confused by the status statement “Pending” on her account information.</td>
<td></td>
</tr>
<tr>
<td>Write feedback</td>
<td>Found the Feedback tab and sent email.</td>
<td></td>
</tr>
<tr>
<td>Give up a ticket</td>
<td>First went to My Tickets, but since she didn’t have ticket she couldn’t give it up.</td>
<td></td>
</tr>
</tbody>
</table>

Table 4. Participant Task and Performance Table: P3 - May

### Participant 4 - Julie

<table>
<thead>
<tr>
<th>Task</th>
<th>Performance and Issues</th>
<th>Other Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Register for ticket</td>
<td>Login: OK</td>
<td>She thought it was very straight forward but at first didn’t understand what each of the tabs were for, she suggested that was include little mouse-over balloon help on the tabs for a more descriptive interface.</td>
</tr>
<tr>
<td></td>
<td>Clicked on Ticket Booth (correct), Get Tickets</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Completed without any problems, she commented that this was “very obvious”.</td>
<td></td>
</tr>
<tr>
<td>Read the news</td>
<td>Found the News tab, but didn’t realized that the little paragraphs in the News page were the news, she tried to click on all the paragraphs as if they were links, perhaps a formatting issue. Log out: ok</td>
<td></td>
</tr>
<tr>
<td>Check ticket status</td>
<td>Went to My Tickets (correct) the first time, had no problem deciding which tab to click on.</td>
<td></td>
</tr>
<tr>
<td>Write feedback</td>
<td>Found the Feedback tab and sent email.</td>
<td></td>
</tr>
<tr>
<td>Give up a ticket</td>
<td>1st went to My Tickets (incorrect)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2nd went to Ticket Booth (correct) and gave up Ticket.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>She didn’t understand that the alert box that was asking if she was sure she wanted to give up the ticket was actually a confirmation of her giving up the ticket…perhaps this could be more clear,</td>
<td></td>
</tr>
</tbody>
</table>

Table 5. Participant Task and Performance Table: P4 – Julie
Participant 5 - Monica

<table>
<thead>
<tr>
<th>Task</th>
<th>Performance and Issues</th>
<th>Other Notes</th>
</tr>
</thead>
</table>
| Register for ticket   | Login: OK  
She stayed on the News tab for a while searching for links to click on. Finally she found the Tabs at the top and realized where to go.  
Found Ticket Booth and registered for a ticket.                                                                 | She needed better feedback on the Give Up Tickets confirmation screen.                                    |
| Read the news         | Took 15 seconds to find the News tab even though she was just there looking at it.  
Log out: ok                                                                                                                                               |                                                                                                         |
| Check ticket status   | Went to My Tickets (correct) the first time, had no problem deciding which tab to click on.                                                                                                                              |                                                                                                         |
| Write feedback        | Found the Feedback tab and sent email.                                                                                                                                                                                   |                                                                                                         |
| Give up a ticket      | 1st went to My Tickets (incorrect)  
2nd went to Ticket Booth (correct) and gave up Ticket.  
She was confused about the dialogue box that pops up for ticket give away confirmation. Once she clicked okay on the dialogue box she didn’t understand why she didn’t have a ticket anymore. |                                                                                                         |

Table 6. Participant Task and Performance Table: P5– Monica

Scripts Used for Participants
Each participant read the tasks and instructions from a script given to them during the usability test (See Appendix A). This worked well as it allowed us — the evaluators — to be completely removed from the testing process. The instructions were thorough enough that the participants did not need to interact with us during the study.

Data Analysis Methodology
Although we had a very small sample of participants for our user evaluation, all of them performed similarly. Most of the participants made the same errors at the same tasks, namely the “give up tickets” task.

When evaluating the participants’ performances, we took into account the necessary learning curve all users go through when first interacting with any system. As with any software program, DuckTix users will need to familiarize themselves with the system in order to use it quickly and
easily. While we cannot completely eliminate the learning curve, there are a few minor changes we could make that would help to decrease the slope of it.

After the observation study, the group met to discuss the observation study. Each participant's observation notes, and video were analyzed, and then the group members agreed upon what the key points of interest and problems were for each participant. The follow two sections discuss those problems and the solutions that we propose for them.

**Overall Usability Problems**

While most participants praised the system, our group noticed a few problems as the participants worked through their tasks. Only halfway through the observation study, our group began to perceive some obvious error trends in DuckTix’s usability.

The most significant problem with DuckTix was one that every participant experienced. In the task of giving up a ticket, every participant selected the My Tickets tab first, instead of the Ticket Booth tab. Most participants quickly noticed that this was the wrong tab and then proceeded to the correct tab: Ticket Booth. However, it quickly became apparent that Ticket Booth was not intuitive for the participants. The problem now seems obvious; a user would naturally go to their tickets in order to give up their ticket.

The second most important problem was the overall system layout. While the participants seemed to accept the layout, many had problems finding information on the interface. Tabs, used in the DuckTix interface, were not even seen by two of the participants at first. While much of the interface uses graphics and color, the small gray tabs, blend into the background. This is a big problem especially for those who are not used to the concept of tabs in a user interface.

A trend that started to develop during the end of the observation study also revealed a problem with DuckTix. The last two participants, after completing the task of giving up their ticket, became confused when they received no confirmation that their ticket had been given up. They were thus unsure of what had actually happened to their ticket.

Another problem worth noting is that the system needs some sort of help feature. One participant actually commented that some sort of feature that would explain the information on the interface would have helped. While observing the other users, it was agreed upon by all group members that a few items on the interface, such as tabs, needed better explanation or some sort of help feature.

**Specific Problems**

**Participant 1**

Participant 1 was able to login and register for a ticket with no problems. The second task of reading the news was also easy for the participant to complete. However, in the third task, when the participant is asked to check the status of his/her ticket, there was some confusion. The participant was not sure where to go, and went to the Feedback and News screens before finding the correct screen My Tickets. At this point, we were unsure if the task itself of checking ticket status was unclear, or if finding the ticket status was the problem.
The participant then went on to complete task 4 with no problems, but ran into difficulty in the fifth task. When asked to give up his ticket, the participant first went to the My Tickets screen, assuming that there would be a way to give up his ticket. After not seeing anything to do in that screen, the participant moved on to the Ticket Booth screen, saw the Give Up Ticket option and quickly finished the task.

After all the tasks were completed, the participant made light of his few difficulties with DuckTix, and only mentioned that he would have liked to see a more appealing background color.

**Participant 2**
Participant 2 was also able to login with no difficulties, however, he did not read his tasks very well, and skipped the first task, which was to register for a football game. The participant jumped ahead to task 2, and completed it with ease. He was able to understand task 3 very well, and he went to the correct screen right away. However, since he skipped task 1 and had no tickets, he was a little confused about what to do.

The participant went on to task 4, and completed it very quickly and easily. In task 5, the participant had a difficult time, deciding where to go in order to give up a ticket. He first went to the My Tickets screen, and then went to the correct screen.

Afterwards, the participant realized that he had skipped the first task, which resulted in some confusion during the other tasks. However, aside from the skipped task, the participant handled all other tasks with ease, except for the last one. The participant said it was unclear where to go in order to give up a ticket.

**Participant 3**
The third participant logged into DuckTix with no problem, but was immediately overwhelmed by the News screen. She did not initially notice the tabs used for viewing other screens. This suggests that the News screen perhaps stands out too well, while the tabs blend in with the other surroundings. After discovering the tabs, the participant quickly went to the correct screen, and completed the task. There was a little confusion, however, when the game she wanted to register for was already selected.

The participant then completed tasks 2 and 3 quickly. In task 3, however, the participant became a little confused as to why the tick status was still pending. An actually lottery was run for each participant who registered for a game, and unfortunately this participant lost the lottery and did not get a ticket. Perhaps the lottery should have been rigged for the observation study.

The participant also completed tasks 4 and 5 with ease. She was able to complete the tasks with no problems. Only in task 5, did we notice that like all the other participants she first went to the My Tickets screen, before going to the correct screen. It is clear that a trend is starting to show in the observation study in task 5. So far all the participants have gone to the My Tickets screen to give up their ticket.

After the study, the participant mentioned that she had difficulties only at the beginning because she did not notice the tabs for switching to different screens. This suggests that the tabs might need to be made more visible.
**Participant 4**

Participant 4 logged into the system, and completed the first task with no difficulties. In task 2, reading the news, the participant went to the *News* screen with ease, but thought that she was supposed to click on a link. This problem was an isolated incident, and was probably a result of misunderstood or miswritten instructions.

Tasks 3 and 4 were both completed with ease by the participant. However, in task 5, once again like all the other participants, she went to the *My Tickets* screen in order to try to give up her ticket. The participant’s second choice was correct, and she proceeded to complete the task. However, after the participant gave up the ticket, she was confused as to why she had no tickets to give up. The problem seems to be that the system asked for confirmation to give up the ticket, but it did not give confirmation that the ticket was given up.

After the tasks were completed, the participant did not think her early problems were of any concern. The participant did mention that she would have liked mouse-over help on the tab labels.

**Participant 5**

The last participant logged into the system with no difficulties, and started looking at the *News* screen first, after a short while, she noticed the tabs, and then proceeded to select the correct screen. Once again, in task 2, the participant took a short while to find the *News* tab. The tab labels seem to be a little hard to notice at first. Given all the flash of the rest of the system, the tabs are the least noticeable item on the interface.

The participant, now more familiar with the design layout, completed tasks 3 and 4 without any problems. In task 5, for the fifth time in a row, the participant selected the *My Tickets* tab first. After not seeing a way to give up her ticket, the participant then moved on to the *Ticket Booth*, and continued the task. She completed the task, but like participant 4, she was confused when she got no confirmation of giving up her ticket. Afterwards, the participant had no negative comments regarding the system.

**Proposed Changes**

Most participants had a difficult time trying to find the panel where they can give up their tickets. All of them went to the *My Tickets* tab instead of *Ticket Booth* tab where the *Give Up Tickets* panel is located. It is logical that a user would go to the *My Tickets* panel to relinquish their tickets. One of the proposed changes to *DuckTix* is to have a direct link from *My Tickets* tab to the *Give Up Tickets* panel, so users can easily jump from the former panel to the latter.

From the usability test, we noticed that it takes most users some time to realize that *DuckTix* has tab options. It took most participants about 15 seconds to realize this. While this is not critical, it is still a problem. Part of the problem lies in the fact that the tabs are in between the logo and the news — both brightly colored and takes the focus away from the tabs. Another reason for this detraction is that the news page is very similar to a web page, and most of the participants are used to such pages, and expects hyperlinks on the page. For example, when asked to register for a ticket, participant 4 kept looking for a hyperlink on the news page to bring her to the *Get*
It took her about 40 seconds to get from the login page to the Get Tickets panel as she kept looking at the news page to locate a link.

To solve the tab pane issue, we decided to add icons to the tab pane so that each tab has a visual cue associated to it. Adding color to the tabs can also draw the user's attention to the tabs. We also plan to have tooltips pop up when the users move their mouse over these tabs. These tooltips will contain information about what tasks the users can perform at those tabs. As for the news page, we may either move it to the last tab, or perhaps have a link on the page itself that can propel the user to the right panel. This last change will require further testing.

Lastly, two of the participants were confused at the Give Up Tickets panel after relinquishing their tickets. After giving up their tickets, DuckTix displays a panel saying, "You do not currently have any tickets to give up." This message confused the participants. Our team proposed to have an informational dialog displayed once the users have relinquished their tickets. One such dialog may contain the message: "Your ticket has been given up," so as to assure the users of their transaction.
Conclusions

Summary of Usability Test
For our user observations we reserved the reading room on the second floor of Deschutes Hall. We had a table set up with three chairs. On the right side was a chair for the test monitor. In the middle is where the user sat and on the left side of the table was a chair for the administrator. On the table we had a laptop with a mouse for the user to perform the tasks, the administrator had a monitor in front of them and a mouse, both were connected to the same laptop. This is so the administrator can perform a few necessary administrative tasks that are required of our system. The user was unable to see the administrator interface. Also in the room there was a digital camera and camera operator, and two test observers who took notes during the observation.

We switched the roles of test monitor, administrator, camera operator and observers for each person we observed. The test monitor followed the “Ten Steps for Conducting a User Observation” (by Apple Computer) that we modified to suit our user observations. The user was given a set of tasks that they were to completely read through and follow. The administrator also had a few tasks to perform behind the scenes while the user was busy reading their next task.

Overall, our testing results provided useful information. We were able to pinpoint some important flaws and design problems with DuckTix. However, we believe that further testing would be needed to gather more information about the usefulness of this system. The next step would be to test the DuckTix administrator interface as well, and run a longer series of tests to see how the system performs over a simulated length of time.

Improvements And Extensions
Our design worked well. All five participants were able to complete the set of tasks provided with little or no confusion. Two of the users were a little confused in task one. This task asked the user to login in, which they had no problem doing, and the second part of task one was to register for a game. As soon as a user logs in the news page is the first thing they see. At the top of the news page (and every page) are some tabs the user can choose from to perform certain tasks. These two users scrolled up and down the news page for a few seconds before realizing there were some option tabs along the top of the page to help navigate them to the correct page. It might help if we had a main menu of some sort as the first page. It was, however, a design choice made by the team to have the news be the first thing the user sees. This decision was made hoping the user would see the pictures and headlines making them excited for the football season and getting a ticket for a game.

Another place where we observed the users being a little confused was when it came time to give up a ticket. Two of the option tags say Ticket Booth and My Tickets. All users read the task as “give up my ticket” which prompted them to go to the My Tickets tab instead of the Ticket Booth tab where the option is. The users who had this problem did suggest a few fixes for this. One option would be to have a text pop-up when the user does a mouse-over of the tabs. Another option is to have a link to the give up tickets page from the My Tickets page.
Aside from the few minor, easily-solved navigation problems, the users commented on how they were impressed with our system and that they would have no problem using our system if the University were to use it in place of the current ticket distribution system.

The next step for the DuckTix system will be a slight revision of the student interface based on the previously mentioned problems, and an extension to the administrator interface. The DuckTix administrator interface was only designed to advance time and events in DuckTix for testing purposes of the student interface. This next step will involve implementing a fully functioning administrator interface for DuckTix.

**Reflection**

From this assignment we have learned how important user observations are when developing user interface driven software. The project goes through a very long and thorough scenario based design process which includes many team brainstorming meetings, rigorous requirements analysis and design phases, the design of different types of systems for the project and the testing of these systems before any programming is done. One would think that once the system has been programmed and all the technical testing is done that the project is complete and ready to be shipped. This however is not the case. Only through the observation of actual users using the software can the team find flaws they may have missed in the development process. From this, the team can rebuild their software to better fit their targeted audience.
Appendix A

DuckTix User Tasks

Instructions:

(please read aloud)

The University has changed the way in which UO students can get their free football tickets. Instead of standing in line for hours to get a ticket, UO Students can now use DuckTix to obtain the tickets.

In the following set of tasks, you will be assuming the role of a UO student by the name of Dakota Smith. Your student Identity number (SID) and your Personal Access Code (PAC) are:

SID: 101010
PAC: 101010

(Please continue on to Task Number 1)

Task Number 1 – Registering for a ticket

(please read the following paragraph aloud before proceeding with the task)

Today’s date is August 12. You want to go get a ticket to the Ducks Football game against Mississippi State.

1. Log into DuckTix.
2. Register to get tickets to the Mississippi State Game.

(Please perform the task above. When the task is completed, please proceed with the next task).

Task Number 2 – Read the News

(please read the following paragraph aloud before proceeding with the task)

Today’s date is August 12. While still logged into DuckTix, you want to read the DuckTix news.

1. Find a paragraph in the DuckTix news and read it aloud.
2. After you are done, logout of DuckTix.

(Please perform the task above. When the task is completed, please proceed with the next task).
Task Number 3 – Checking the status of registered ticket

(please read the following paragraph aloud before proceeding with the task)

Today’s date is August 16. You want to check the status of the ticket that you registered for on August 12.

1. Log into DuckTix
2. Find the status of the Mississippi State game ticket
3. Read the status of the ticket out loud.

(Please perform the task above. When the task is completed, please proceed with the next task).

Task Number 4 – Writing a feedback

(please read the following paragraph aloud before proceeding with the task)

Today’s date is August 16. While you are still logged into DuckTix, you wish to write a feedback to the DuckTix Administrator, telling him/her how you feel about the DuckTix program.

1. Write feedback to DuckTix Administrator.
2. Submit the feedback.
3. Logout of DuckTix.

(Please perform the task above. When the task is completed, please proceed with the next task).

Task Number 5 – Giving Up a ticket

(please read the following paragraph aloud before proceeding with the task)

Today’s date is August 19. You realized that you are not able to make it to the Mississippi State game, and you want to give up the ticket to other students who might want to attend that game.

1. Log into DuckTix.
2. Give up your Mississippi State game ticket.
3. Logout of DuckTix.

(Please perform the task above. When the task is completed, please proceed with the next instruction).

You have completed the set of tasks. Thank you for your participation.

(Please signal the Test Monitor of your completion)
Appendix B

Test Coordinator Tasks

This set of tasks is for the DuckTix Administrator to perform DURING the User observation study.

1. Before each participant, please make sure you reset the data!!!

2. **Advance Event:**
   - Before *Task Number 1* begins, press the “Start Registration” button.
   - Event Date should now be: August 12

3. User performs *Task Number 1 (Registering for a ticket).*

4. User performs *Task Number 2 (Read the News).*

5. **Advance Event:**
   - While user is reading Task Number 3, click the “Run Lottery” button.
   - Event Date should now be: August 16

6. User performs *Task Number 3 (Checking the status of registered ticket).*

7. User performs *Task Number 4 (Writing a feedback).*

8. **Advance Event:**
   - While user is reading Task Number 5, click the “Start Registration” button.
   - Event Date should now be: August 19

9. User performs *Task Number 5 (Giving Up a ticket).*
Appendix C
DuckTix Usability Test Observation Notes Sheet

Participant’s Name:  

<table>
<thead>
<tr>
<th>Task Number 1 – Registering for a ticket</th>
<th>Other Notes:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Task Number 2 – Read the News</td>
<td></td>
</tr>
<tr>
<td>Task Number 3 – Checking the status of ticket</td>
<td></td>
</tr>
<tr>
<td>Task Number 4 – Writing a feedback</td>
<td></td>
</tr>
<tr>
<td>Task Number 5 – Giving Up a ticket</td>
<td></td>
</tr>
</tbody>
</table>
Appendix D

DuckTix Test Monitor Guide

10 Steps for Conducting a User Observation

1. Introduce yourself and describe purpose of the observation.
   - We are: from CIS 443 class, trying to do an observation study for DuckTix.
   - DuckTix is a system where UO students can log into and register for tickets. The tickets are allotted to students based on a Priority Lottery formula.
   - We are here to evaluate the product. You will be given a set of tasks to complete.
   - “If you have trouble with some of the tasks, it’s the product’s fault, not yours.”
   - “Don’t feel bad; these faults are exactly what we’re looking for in our product.”

2. Tell participant that it is OK to quit at any time.
   - “Although I don’t know of any reason for this to happen, but if you should feel uncomfortable in performing a task, you are free to quit at any time.”

3. Talk about equipment in the room.
   - Laptop — platform for you to perform the tasks.
   - Video — we will be videotaping this process for our professor.
   - People — some observers who will be taking notes (They will not intervene at any point).
     We also have a task coordinator, who will be coordinating the tasks. He/She will occasionally use the laptop in between your tasks.
   - Anything else in the room?

4. Explain how to think aloud.
   - Say what comes to your mind. This is a way for us to know what you are thinking.
   - We know you might feel awkward or self-conscious about thinking aloud, but rest assure, thinking aloud would only help you be more confident with performing your tasks.
   - If you are confused when performing the task, don’t worry, just express your confusion.
     “Remember, we are testing the product, not you.”
   - During the study, I will occasionally prompt you to think aloud.

5. Explain that you will not provide help.
   - “As you are working through the exercises, I won’t be able to provide help or answer questions. This is because we want to create the most realistic situation possible.”
“Even though I won’t be able to answer your questions, please ask them anyway. It’s very important that I capture all your questions and comments. When you’ve finished all the exercises, I’ll answer any questions you may still have.”

6. **Describe in general terms what the participant will be doing.**
   - On the table are two sheets of paper with a set of tasks and instructions. Read the instructions and tasks aloud. After reading each task, please stop and perform the task. When you have completed one task, go ahead and read the next task, and so on and so forth. Remember, if you are uncomfortable with any tasks, you are free to quit at any time.

7. **Ask if there are any questions before you start.**
   - Answer the questions.

 >>>>>>>>>>>>>>>>>>>>>>> BEGIN STUDY <<<<<<<<<<<<<<<<<<<<<<<<

8. **DURING the observation:**
   - Prompt the participant to think aloud.
   - When a participant is hesitating or saying “Hmmmm” ask what he/she is thinking about.
   - BE PATIENT! Listen to them first. Don’t try to interrupt.

 >>>>>>>>>>>>>>>>>>>>>>> END STUDY <<<<<<<<<<<<<<<<<<<<<<<<

9. **Conclude the observation**
   - Explain what you were trying to find out during the test. Ease of use. How friendly the User Interface is, etc.
   - Answer any remaining questions the participant may have.
   - Discuss any interesting behaviors you would like the participant to explain.
   - Ask the participant for suggestions on how to improve the product.

10. **Use the results / End the study**
    - Thank the participant for his/her help.